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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,384	06/03/2005	Richard N Fargo	60469-220;OT-5079	4539
7590 09/08/2009				
David J. Gaskey Carlson, Gaskey & Olds 400 w. maple rd suite 350 Birmingham, MI 48009				
EXAMINER				
SINGH, KAVEL				
ART UNIT		PAPER NUMBER		
3651				
MAIL DATE		DELIVERY MODE		
09/08/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/537,384

**Applicant(s)**

FARGO ET AL.

**Examiner**

KAVEL P. SINGH

**Art Unit**

3651

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 8-10, 12-16, 18, 19, 21 and 23-26 is/are rejected.
- 7) ☒ Claim(s) 5, 7, 11, 17, 20 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

In view of the appeal brief filed on 5/18/09, PROSECUTION IS HEREBY REOPENED. A new grounds of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4,6,8,10,12-16,18,19, and 21 are rejected under 35 U.S.C. 102(b) as being Luigi by 6,536,583.

Claim 1, Luigi teaches an inner side (side of 13) adapted to engage a drive member 16 C2 L33; and an outer side including a plurality of teeth 12 that are adapted to engage a corresponding portion of a step chain 2, the outer side teeth 12 each including a base (metal core C2 L16) and a pliable projection distal (edge of teeth of plastic material C2 L17) from the base Fig. 2.

Claim 2, Luigi teaches the projections (edge of 12) are rounded Fig. 2.

Claim 3, Luigi teaches each of the teeth 12 includes a generally concave surface extending between the projection (edge of 12) and the base (metal core).

Claim 4, Luigi teaches the teeth 12 each have an engaging surface profile (to 3) that includes the projection (the edge), the engaging surface including a first concave portion having a first radius of curvature beginning adjacent the base (metal core), a second concave portion having a second radius of curvature adjacent the first portion and a third concave portion having a third radius of curvature extending between the second portion and the projection (Fig. 2) C2 L12-14 Fig. 3.

Claims 6 and 19, Luigi teaches the projection (edge of 12) has a first section with a first projection radius of curvature (on one side of tooth) adjacent the third portion (down section) and a second section (tooth adjacent) with a second projection radius (edge of 2<sup>nd</sup> tooth 12) of curvature extending between the first section and the distal end Fig. 2.

Claim 8, Luigi teaches the teeth 12 each include a relief near the projection that increases the compliance of the tooth 12 near the projection (the edge).

Claims 10 and 21, Luigi teaches a second plurality of teeth (side of 13 C2 L23-25 flat top trajectory) on the inner side and wherein the plurality of teeth 12 on the outer side

have a first pitch that is different than a second pitch of the second plurality of teeth Fig. 1 (C2 10-15).

Claim 12, Luigi teaches the second pitch (flat top) is approximately one-half of the first pitch (having depth, approx. half) C2 L23;C2 L10-15.

Claim 13, Luigi teaches a step chain 2 having a plurality of links 3 each having a plurality of engaging members 11; a drive mechanism C2 L33; and a belt 5 having an inner side (side of 13) that cooperates with the drive mechanism and an outer side including a plurality of teeth 12 having engaging surfaces 11 that are at least partially concave portion of the teeth 12 elastically deforming (made from plastic) responsive to contact and that cooperate with the engaging members 11 on the step chain 2, wherein that movement of the drive mechanism causes movement of the belt 5 which causes movement of the step chain 2.

Claim 14, Luigi teaches the step chain 2 engaging members include teeth 11 having a convex surface that is at least partially received within the concave portion of the belt 5 teeth engaging surfaces Fig. 5.

Claim 15, Luigi teaches the belt teeth 12 each include a compressible projection (edge) near a distal end of the teeth 12.

Claim 16, Luigi teaches the teeth 12 engaging surfaces include a first portion having a first radius of curvature, a second portion having a second radius of curvature adjacent the first portion and a third portion having a third radius of curvature extending between the second portion and the projection (edge) Fig. 2 and Fig. 5 (engaging surface).

Claim 18, Luigi teaches the first, second and third portions establish the concave portion

of the engaging surface and the projection (edge of 12) establishes a convex portion of the engaging surface into 11 Fig. 2 and 5 C2 L10-15.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luigi U.S. Patent 6,536,583 in view of Mol U.S. Patent No. 7,210,573.

Claim 9, Luigi teaches the teeth 12 made from plastic C2 L18-20, but Mol teaches a belt 100, 150 comprise a urethane material (C3 L5-8). It would be obvious to one of ordinary skill to use a urethane belt as taught by Mol into the invention of Luigi since urethane is known to be stretchable and pliable and will conform to fit into the engaging surface.

Claims 23, 24, 25, and 26, Luigi does not teach as Mol teaches a belt body comprising the urethane material and a projection near an end of the teeth 108 spaced from the body (C3 L5-8). It would have been obvious to one of ordinary skill to use urethane material for the belt with teeth as taught by Mol into the invention of Luigi in order to allow the belt to conform into the engaging surfaces.

***Allowable Subject Matter***

Claim 5,7, 11,17,20, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ms. Kavel P. Singh whose telephone number is (571) 272-2362. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KPS

/Gene Crawford/  
Supervisory Patent Examiner, Art  
Unit 3651